

INTERNATIONAL SEARCH REPORT

 International application No.
PCT/AU2004/000415

A. CLASSIFICATION OF SUBJECT MATTER Int. Cl. ⁷ : E03C 1/02 According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) Refer Electronic Database consulted below Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched US CLASS 137/337 Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) Derwent World Patent Index: E03C-001/02 AND keywords (HOT+ OR HEAT+), (CIRCULAT+ OR RECIRCULAT+ OR RE-CIRCULAT+)		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5564462 A (STORCH) 15 October 1996 See the whole document	1 – 10, 16, 11 – 15, 17 – 19
A	US 5452740 A (BOWMAN) 26 September 1995 See the whole document	1 – 10, 16, 11 – 15, 17 – 19
A	US 5339859 A (BOWMAN) 23 August 1994 See the whole document	1 – 10, 16, 11 – 15, 17 – 19
A	US 3799181 A (MADDREN) 26 March 1974 See the whole document	1 – 10, 16, 11 – 15, 17 – 19
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C <input checked="" type="checkbox"/> See patent family annex		
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family	
Date of the actual completion of the international search 2 July 2004	Date of mailing of the international search report 08 JUL 2004	
Name and mailing address of the ISA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaaustralia.gov.au Facsimile No. (02) 6285 3929	Authorized officer C. NGUYEN-KIM Telephone No : (02) 6283 2121	

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5671771 A (BRANDEL) 30 September 1997 See the whole document	1 – 10, 16, 11 – 15, 17 – 19
A	US 5622203 A (GIVLER et al) 22 April 1997 See the whole document	1 – 10, 16, 11 – 15, 17 – 19
A	US 4697614 A (POWERS et al) 6 October 1987 See the whole document	1 – 10, 16, 11 – 15, 17 – 19

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PCT/AU2004/000415**Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)**

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a)

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

See the Supplemental Box

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☒ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

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(To be used when the space in any of Boxes I to VIII is not sufficient)

Continuation of Box No: III

The international application does not comply with the requirements of unity of invention because it does not relate to one invention or to a group of inventions so linked as to form a single general inventive concept. In coming to this conclusion the International Searching Authority has found that there are different inventions as follows:

1. Independent claims 1, 2, 16 are directed to a valve assembly in which a hot water valve means is opened or closed in response to a predetermined water temperature entering the valve assembly housing; and two cold water valve means are opened or closed in response to a predetermined water temperature entering the valve assembly housing and to a predetermined drop / increase in pressure at the hot water outlet.
2. Independent claims 11, 12, 14, 15, 17 – 19 are directed to a water recovery / reticulation system and a method thereof in which, upon opening the hot water outlet tap, the hot water that has been cooled down is diverted by a mechanical actuated diverter valve to a cold water storage means until the water flowing through the diverter valve reaches a predetermined temperature; the cooled down water collected in the cold water storage means is sucked or pumped to a cold water supply / delivery pipe.

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Information on patent family members

International application No.

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This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report	Patent Family Member
US 5564462	
US 5452740	US 5339859
US 3799181	
US 5671771	
US 5622203	
US 4697614	
Due to data integration issues this family listing may not include 10 digit Australian applications filed since May 2001.	
END OF ANNEX	